

## REMARKS

Reconsideration of the above-identified application is respectfully requested.

In the course of preparing figures for enclosed Appendix A, an error was noted in sheet 2 of the drawings. A substitute sheet is enclosed, with reference number 52 properly located.

Claims 1–7 were rejected as unpatentable over Ku et al. With respect to claim 1 the Examiner relates the digitizing, applying, and counting steps specifically to the Ku et al. patent. Then the Examiner says the following.

“incrementing a second counter (i.e. U/D counter) when the count is above a first threshold (i.e. upper threshold, Tu) [Fig. 3B; col. 7, line 44 to col. 8, line 7];”

Enclosed as Appendix A is a sketch of the identified portions of the Ku et al. drawings and a partial reproduction of applicants' FIG. 6.

- (1) Where is the connection disclosed between the up/down counter of FIG. 1F and first counter 38,48? The Examiner specifically identifies no counter in the drawings. It is presumed that the up/down counter in FIG. 1F is intended because it is the only up/down counter in the figures relied on by the Examiner.
- (2) Where is the teaching to substitute the elements in FIGS. 3A, 5A for exclusive-NOR circuit 19A? The Examiner is conveniently adding the up/down counter from FIG. 1F to the output of threshold detector 38,48. What is the basis for this?
- (3) Where is the teaching to *additively combine* elements from various figures? The correlators in FIGS. 1F, 3A, and 5F are disclosed as alternative circuits providing a function.
- (4) It is respectfully submitted that the disclosure of the Ku et al. patent merely describes the existence of the elements, not the arrangement proposed by the Examiner.
- (5) For the foregoing reasons, it is respectfully submitted that claims 1–7 fully distinguish over the Ku et al. patent.

Regarding claim 3, the Examiner notes the following.

“Clearly claim 3 does not recite the limitation ‘a delay of 50 milliseconds or less’”.

1. Applicants never said that claim 3 recited the definition of “shadow.” What applicants said was that “shadow” is a defined term in applicants’ specification. The word “shadow” is used in claim 3.
2. Applicants’ right to be their own lexicographer is recognized in the MPEP (e.g. §2106 II. C.) and in binding court precedent.
3. Denying the existence of the definition ignores a recitation of the claim. *“Finally, when evaluating the scope of a claim, every limitation in the claim must be considered”* MPEP §2106.
4. Ignoring a claim recitation makes a rejection improper on its face.
5. Claim 3 further distinguishes for the reasons given with respect to claim 1.

Regarding claim 6, the Examiner further assembles elements from various figures. FIG. 3B illustrates the operation of FIG. 3A. In this regard, the Ku et al. patent discloses the following at column 7, lines 54–58.

“At time t2, the accumulation signal Ai is supplied by convoluter 37 as the convolution result Ci to a threshold detector 38 that compares the convolution result Ci with a threshold, and drives a match signal active if the convolution result Ci has a greater value than upper threshold Tu or lesser value than lower threshold T1.”

1. As clearly stated there is but a **single output signal** from the comparator, “a match signal.” It is either “active” or not active. This is not the same as comparing to two thresholds and producing two signals from two comparators. One bit describes only two states. Two bits describe four states. It is **impossible** to describe three states from an output that is either “active” or not active. When the output is “active,” the meaning is **ambiguous** because the “active” output represents either of **two** conditions, as described in the portion quoted above. One does not know which threshold has been crossed.
2. Claim 6 recites decrementing when below a first threshold and incrementing when above a second threshold. In the circuit disclosed in the Ku et al. patent, **both** conditions are represented by the “match” signal. How can the same signal cause an up/down counter to both decrement and increment?

3. It is respectfully submitted that the apparatus disclosed by the Ku et al. patent operates in a fundamentally different way from the claimed invention and that the differences are unobvious.

In view of the foregoing, it is respectfully submitted that claims 1-7 are in condition for allowance and a Notice to that effect is respectfully requested.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Paul F. Wille".

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## REPLACEMENT SHEET

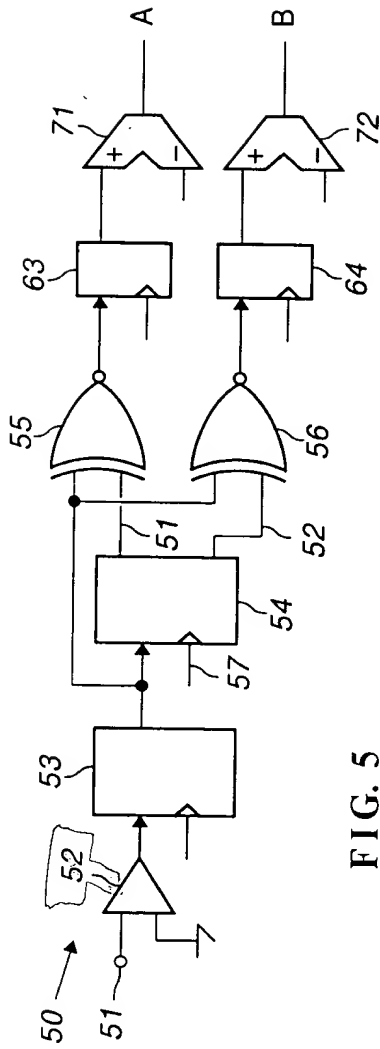


FIG. 5

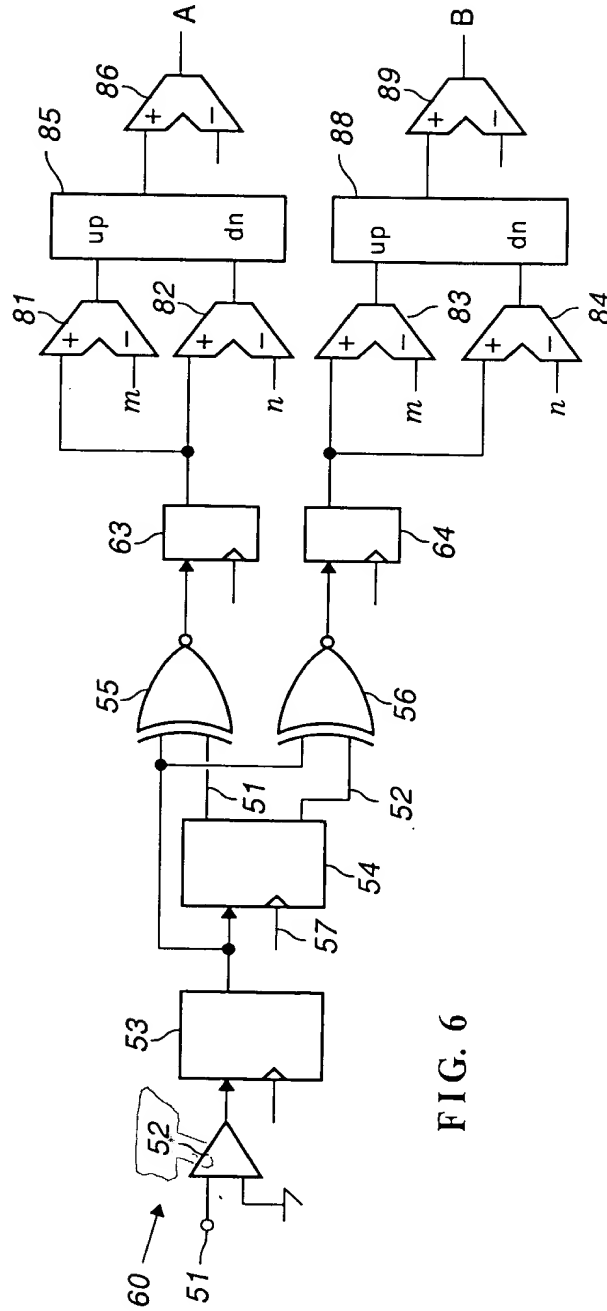


FIG. 6

COPY SHOWING  
CHANGES